

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for improving utilization in a peer-to-peer network having a plurality of nodes, the method comprising:

hosting one or more storage slots in each node in the peer-to-peer network[[,]];

wherein:

each node comprises a respective amount of physical storage capacity;

each storage slot represents a predefined amount of storage capacity;

each node hosts a number of storage slots representing a total amount of storage capacity greater than the node's physical storage capacity; and

at each node, a first portion of the storage slots ~~hosting~~ host storage zones and any remaining storage slots ~~at each node~~ are allocated as a free slot reserve storage slots;

the method further comprising:

storing data in the storage slots hosting storage zones; and

when a storage slot hosting a storage zone reaches a full capacity of the storage zone,

splitting the data in the storage slot hosting the storage zone into a first and second portion,

converting a free slot reserve storage slot into a new storage slot hosting a storage zone, and

transferring the second portion of the data to the new storage slot hosting the storage zone.

2. (Cancelled)

3. (Currently Amended) The method of claim 2 1 wherein each node is allocated $N - 2 \times N - 1$ virtual slots ~~for each N storage slots allocated, where N equals the physical storage capacity of the node divided by the predefined amount of storage capacity of a storage slot.~~
4. (Currently Amended) The method of claim 2 1 wherein a storage zone at a node is transferred to another node in the peer-to-peer network if the data inserted into the storage zones at the node fills the actual physical capacity of the node.
5. (Original) The method of claim 4 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the storage zone.
6. (Previously presented) The method of claim 1 wherein the new storage zone is transferred to and hosted by a free slot reserve storage slot on a different node when the storage zones hosted at the node exceed the storage slots allocated at the node.
7. (Original) The method of claim 6 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the new storage zone.
8. (Original) The method of claim 1 wherein the data is associated with hashkeys of a hash function and where each storage zone is responsible for a subset of all hashkeys.
9. (Original) The method of claim 8 wherein the hashkeys are uniformly distributed by the hash function.
10. (Original) The method of claim 1 wherein the storage slots are of a fixed-size.
- 11 – 20. (Cancelled).

21. (Previously presented) The method of claim 1, wherein each storage zone is hosted by a storage slot located within a particular physical node.
- 22 – 24. (Cancelled).
25. (Previously Presented) The method of claim 1, wherein a zone is hosted within a slot and a size of the slot is a system wide constraint representing the limit size to which a zone can grow before it fills the slot and must be split.
26. (Cancelled).
27. (Cancelled).